Subject Index to Volume 8

A

Active filters, 709–721
Activity/events, 97–99
Adaption, 261–269
AI in networks, 703–708
Alarm Management, 461–467
Artificial
  intelligence, 319–331, 345–354, 601–613, 709–721
  neural networks, 25–34, 71–80, 211–221, 515–525
ART2 neural network, 569–578
Assembly sequences, 129–145
Automated
  assembly, 1–13
  document processing, 469–472
Automatic
  scheduling tools, 681–688
  state acquisition, 157–168
Autonomous vehicles, 271–280

B

Backpropagation algorithms, 211–221
Bioreactor control, 689–701
Book Reviews, 101–102, 229–230, 365, 589–591, 723
Bridge
  design, 435–447
  structures, 211–221

C

Case-based reasoning, 561–567
Characteristics of expert control systems, 413–421
Circuits and systems, 709–721
Classification, 191–199, 223–227
Clustering, 223–227, 539–547
Codification schemes, 15–24
Combinatorial optimization, 223–227
Communication networks, 61–69
Conceptual
  distances, 391–399
  process design, 115–127
Concurrent programming, 169–175
Consistency, 251–260
Constraint logic programming, 379–390
Control software, 671–680
Criticism, 435–447
Curve fitting, 177–189
Cycles, 539–547

D

Damage detection, 211–221
Data Relay Satellites, 147–156
Data-driven strategies, 449–460
Databases, 449–460
Decentralized control, 201–209
Decision tree classifiers, 391–399
Decomposition, 201–209
Delta operator, 633–642

Subject Index to Volume 8

A

Active filters, 709–721
Activity/events, 97–99
Adaption, 261–269
AI in networks, 703–708
Alarm Management, 461–467
Artificial
  intelligence, 319–331, 345–354, 601–613, 709–721
  neural networks, 25–34, 71–80, 211–221, 515–525
ART2 neural network, 569–578
Assembly sequences, 129–145
Automated
  assembly, 1–13
  document processing, 469–472
Automatic
  scheduling tools, 681–688
  state acquisition, 157–168
Autonomous vehicles, 271–280

B

Backpropagation algorithms, 211–221
Bioreactor control, 689–701
Book Reviews, 101–102, 229–230, 365, 589–591, 723
Bridge
  design, 435–447
  structures, 211–221

C

Case-based reasoning, 561–567
Characteristics of expert control systems, 413–421
Circuits and systems, 709–721
Classification, 191–199, 223–227
Clustering, 223–227, 539–547
Codification schemes, 15–24
Combinatorial optimization, 223–227
Communication networks, 61–69
Conceptual
  distances, 391–399
  process design, 115–127
Concurrent programming, 169–175
Consistency, 251–260
Constraint logic programming, 379–390
Control software, 671–680
Criticism, 435–447
Curve fitting, 177–189
Cycles, 539–547

D

Damage detection, 211–221
Data Relay Satellites, 147–156
Data-driven strategies, 449–460
Databases, 449–460
Decentralized control, 201–209
Decision tree classifiers, 391–399
Decomposition, 201–209
Delta operator, 633–642

Design principles, 527–537
Determination of synchronization among multiple terminal states, 157–168
Development methods, 527–537
Dynamic systems, 71–80

E
Economic power dispatch, 665–670
Eddy currents, 309–318
Egomotion, 271–280
Electric power networks, 449–460
Engineering
applications, 413–421
implementations, 527–537
Episode analysis, 53–60
Estimation, 499–514
Expert systems, 129–145, 309–318, 319–331, 355–364, 413–421, 449–460, 515–525, 527–537, 561–567, 709–721,

F
Fail-safe stability, 625–632
Failure identification, 499–514
Fast sampling, 633–642
Fault
tolerance, 615–623
diagnosis, 35–51, 353–364, 391–399, 703–708
Fault-trees, 449–460
Feature selection, 633–642
FEM, 211–221
Fibre optics, 319–331
Formal methods, 615–623
Fuzzy
expert systems, 423–433
linguistic control, 201–209
logic, 25–34, 281–298, 483–498, 643–650
logic applications, 657–664
relations, 201–209
sets, 379–390
systems, 499–514, 601–613

G
Generalization, 391–399
Generalized delta rule (GDR), 211–221
Genetic algorithms, 177–189, 261–269, 601–613, 671–680
Global
optima, 223–227
optimization, 665–670

H
Handwriting recognition, 469–472
Heat exchanger networks, 115–127
Heuristic
methods, 61–69
searches, 223–227
Heuristics, 147–156
High-speed signal processing, 633–642
Hybrid systems, 515–525, 681–688

I
Identification, 499–514
Implementation issues, 413–421
In-store automation, 81–90
Inference, 281–298

Inference engines, 449–460
Integrated systems, 401–412
Intelligent
control, 413–421, 527–537
design environments, 115–127
Internal model control, 483–498, 689–701
Intervals/points, 97–99

K
Knowledge
acquisition, 1–13, 333–344, 391–399
elicitation, 15–24
engineering, 709–721
representation, 15–24, 53–60
Knowledge-based systems, 35–51, 61–69, 147–156, 435–447, 601–613
Knowledge bases, 391–399, 449–460

L
Language analysis, 345–354
Large-scale systems, 201–209
Learning
algorithms, 191–199
systems, 299–308
Least
median squares, 177–189
squares, 177–189
Load predictions, 423–433
Logic
paths, 539–547
programming, 345–354

M
Madaline network, 569–578
Man-machine systems, 299–308
Manual control modelling, 299–308
Manufacturing floor conflict problems, 169–175
Markovian minimal cut sets, 449–460
Material design, 15–24
Mathematical morphology, 281–298
Metagrammers, 345–354
Metal casting design, 561–567
Mobile robots, 91–95
Model
identification, 299–308
reduction, 549–559
Multi-robot systems, 169–175
Multi-sensor integration, 25–34
Multilayer perceptions, 211–221
Multivariable systems, 201–209

N
Network
architectures, 211–221
fault-diagnosis, 703–708
management, 703–708
optimization, 333–344
Neural-network control, 625–632
Neural
net training, 71–80
networks, 35–51, 81–90, 129–145, 191–199, 299–308, 483–498, 579–588, 601–613, 615–623, 689–701

Neuro-fuzzy computing, 423–433
Non-interview techniques, 15–24
Non-linear
  black-box modelling, 71–80
  control, 483–498
Nondestructive testing, 309–318
Nonlinear process control, 689–701
Nuclear power plants, 309–318

O
Object motion prediction, 569–578
Object-orientated programming, 461–467
Object-oriented programming techniques, 115–127, 561–567
Observers, 261–269
Obstacle
  avoidance, 91–95
  detection, 271–280
Optical fibre communications, 319–331
Optimization, 129–145
Optoelectronics design, 319–331

P
Paper models, 15–24
Parallel algorithms, 515–525
Parsimonious covering theory, 703–708
Path searches, 539–547
Pattern
  matching, 449–460
  recognition, 469–472
Petri nets, 169–175, 643–650
Planning and reasoning, 401–412
Principal component analysis, 633–642
Process
  control, 53–60, 251–260, 299–308, 483–498
  control and monitoring, 643–650
  models, 435–447

Q
Qualitative
  model, 549–559
  modelling, 35–51
  simulation, 379–390
Quantitative prediction, 569–578

R
Realsitic Abductive Reasoning Model, 703–708
Real-time
  AI, 243–250
  computing, 251–260
  control, 243–250, 615–623
  expert systems, 643–650
  navigation, 91–95
Reliability, 449–460
Reverse engineering, 345–354
Rule-based inferencing, 435–447
Rule induction, 333–344

S
Safety, 251–260
Safety-critical systems, 53–60, 601–613

Safety
in control systems, 243–250
systems, 615–623
Scheduling, 147–156
Security assessment, 657–664
Sensor monitoring, 35–51
Separation process, 549–559
Signal processing, 309–318
Signed directed graph, 549–559
Simulated annealing, 61–69, 665–670
Skeletal legs, 281–298
Slant correction, 469–472
Software
comprehension, 345–354
engineering, 345–354, 709–721
safety, 601–613
testing, 671–680
tools, 643–650
Spacecraft attitude control, 651–656
State estimators, 261–269
Steam generator, 309–318
Stochastic dependencies, 449–460
STR (state transition rule) method, 157–168
Structure-from-motion, 271–280
Structural identification, 211–221
Synthesis, 435–447
System
identification, 71–80
reliability, 651–656

T
Telecommunication service interaction, 157–168
Temporal
algebra, 681–688
logic, 251–260
reasoning, 53–60
relationships, 53–60, 97–99
Testing
of expert systems, 539–547
patterns, 211–221
Thinning, 281–298
Time series modelling, 423–433
Tool life criteria, 579–588
Topological design, 61–69, 333–344
Training patterns, 211–221
Trend analysis, 35–51
Turbine blades, 25–34
Tutorials, 319–331

U
User interfaces, 449–460

V
Verification of AI-based control systems, 243–250
Vibratory feeding, 1–13
Voltage stability, 657–664
Voting, 615–623

W
Wavelet decomposition, 579–588
Working memory, 449–460

Author Index for Volume 8

Adinolfi M., 147
Ah Chung Tsoi, 633
Aoyama A., 483, 689
Armando A., 401

Back A., 633
Baozong Yuan, 223
Barai S. V., 211
Barua A., 709
Bass J. M., 615
Benoist B., 309
Bin Yu, 223
Binh L. N., 319
Bourjolly J.-M., 61
te Braake H. A. B., 71
Buoni F. B., 681

Cesta A., 147
Cheng-Ching Yu, 549
Cho H. S., 129
Chuang K. T., 115
Cimatti A., 401
Cohen G., 169
Cowell D., 561
Croll P. R., 615

Dabke K. P., 319
Dash P. K., 423
Dash S., 423
Dioume O., 61
Doyle III F. J., 483

El-Jaroudi A., 191
Enab Y. M., 299

Fang X. D., 15
Feliberti V., 469
Fleming P. J., 615
Fuell H., 723

Gaillard P., 309
Gegov A. E., 201
Giannone A., 345
Giunchiglia E., 401
Gupta A., 469

Harada Y., 157
Hasan K., 461
Hong D. S., 129
Hong G. S., 579
Hong-Yuan Liao, 81
Hsiao-Rong Tyan, 81
Hudli A. V., 515
Hung Y. S., 599, 625
Hunt J., 671
Hura G. S., 539
Hyppolite M.-A., 61

Jeng-Horng Lai, 549
Jixin Ma, 97
Johnson G. L., 601
Józsa L., 449

Karr C. L., 177
Kit Po Wong, 665
Knight B., 97, 561
Koishi T., 391
Krishnamoorthy C. S., 435
Kuo R. J., 25

Lam S., 625
Lau S. P., 319
Laukonen E. G., 499
Lee C. K., 281
Lee S. S. G., 1
Leitch R., 379
Liang-Hua Chen, 81
Liew A. C., 423
Lim L. E. N., 1
Linkens D. A., 413, 527
Lo K. L., 657

Macleod I. M., 251
Maresca P., 345
Martin-Vega L. A., 681
Martinelli E., 379
Massart D. L., 177
Matijevics I., 449
McDuffie E. L., 681
Min-You Chen, 413, 527
Morizet-Mahoudeaux P., 309
Moyes I., 461

Nagendra Prasad M. V., 469
Nakasuka S., 391
Ng T. S., 599
Ngoi B. K. A., 1

Ohta T., 157

Palakal M. J., 515
Pandey P. C., 211
Pang G. K. H., 643
Parthasarathy S., 53, 473
Passino K. M., 261, 499
Patel N., 709
Pecchiari P., 401
Persons W. L., 601
Petrus B., 191
Phoha V. V., 589
Pierre S., 61, 333
Pigeon M., 309
Porter II L. M. L., 261
Preddy K., 561
Prem Kumar G., 703
Price C., 365

Qiuming Zhu, 569

Rahman M., 579
Rahman S., 423
Rajagopalan N., 435
Rama Rao K. V., 355
Ramsay B., 461
Rao M., 115
Rengaswamy R., 35
Rodd M. G., 243
Rodrigues M., 101
Rudas I. J., 590

Satyanarayana T., 355
Schneider M., 681
Schneider M., 681
Sharkey A. J. C., 615
Sharkey N. E., 615
Shiva Kumar H., 435
Shivathaya S. S., 15
Shnaider E., 681
Shu Y. Q., 115
Shu-Jen Liu, 81
Smith S. M., 271
Spalazzi L., 401
Srikanthan T., 539
Stothert A. G., 251
van Straten G., 71
Subramanyam G., 355
Suski G. J., 601

Tan P. S., 1
Tang R., 643
Tawfik A. Y., 569
Tepandi J., 229
Terashima N., 157
Traverso P., 401
Tso S. K., 657

Vankeerberghen P., 177
Venkataram P., 703
Venkatasubramanian V., 35, 483, 689

Wang Q., 115
Weck B., 177
Wong S. P., 281
Woo Stephen S., 643
Wright W. A., 651

Zeng Q. Y., 657
Zeng-Ren Yuan, 91
Zhao-Qing Ma, 91
Zhou Q., 579
Zhu J. Y., 115
Zhu T. X., 657

Typeset in Great Britain by Apek Typesetters, Nailsea, Bristol. Printed by BPC Wheatons Ltd, Exeter